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LETTER / *Genito-urinary*

Prostatic hydatid cyst: A case study

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Hydatid disease is endemic in animal farming countries such as the Mediterranean countries, South America, East Africa, Australia and New Zealand. Although this parasite does not spare any organ, location in the urogenital tract remains rare. The authors present an exceptional case of a prostatic hydatid cyst that was diagnosed with imaging and removed with endoscopy.

Case report

A 72-year-old man, without antecedents, consulted for disorders of the lower urinary tract such as dysuria, pollakiuria and nycturia that have been evolving for several months. The patient was in a good general condition although the rectal examination detected a renitent and painless mass of the right prostatic lobe. The transrectal ultrasound revealed a well-defined, separate cyst whose contents were hypoechogenic in certain places. It occupied the median region and the apex of the right prostatic lobe and extended to the peri-prostatic fat with a bi-lobate appearance (Fig. 1). The cyst measured 45 × 32 mm. The CT scan confirmed the seat and liquid content of the cyst and revealed a parietal enhancement after injection of contrast (Fig. 2a, b). Examination of the thoracic and abdominal cavity did not detect any other locations.

The patient did not present hyper eosinophilia but the hydatic serology was highly positive. A superinfected hydatid cyst was diagnosed. The superinfected nature was based on the hypoechogenic liquid content in the ultrasound and on the parietal thickening and enhancement after contrast product in the CT scan. The bacteriology sample confirmed the presence of *Escherichia coli* and an adapted antibiotic treatment was prescribed. An ultrasound control after 3 months confirmed the disappearance of the cyst.

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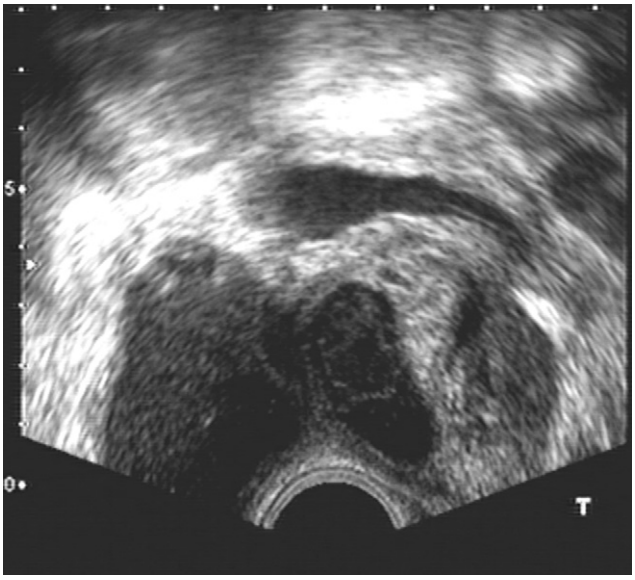

Figure 1. Transrectal ultrasound, prostate cross-section: well-defined, partitioned cystic formation of the right lobe with extra-prostatic extension.

Discussion

In man, hydaytid cyst results from the infestation by the larval form of canine taenia, *Echinococcus granulosus*. In addition to sheep, several herbivores may also be intermediate hosts: goats, cattle, camels and antelopes [1].

Man is infected by the ingestion of eggs containing hexacanth embryos in soiled food or by dirty hands after touching a parasitic dog. The two organs most often infected are the liver (65%) and the lung (25%) [2]. The kidney accounts for 2—4% of all locations in the urinary tract [3]. Prostatic hydatid cyst is exceptional. Only about ten cases have been published in the literature [4]. The contamination of the gland may be secondary to the rupture of an intra-abdominal or primary cyst, as in our case, by haematogeneic or lymphatic route [5].

The prostatic hydatid cyst is mainly observed in the young adult ranging from 30 to 50 years without any specific symptomatology. The closed cyst may be responsible for lower urinary tract infections that may provoke urine retention. Hydatiduria, almost pathognomonic, or haematuria may occur in cases of an open cyst in the urethra [6].

The imaging of hydatid cyst is fairly characteristic. In the ultrasound, the cyst may be mono or multiloculate, with a homogenous or heterogenous liquid content and well-defined by a fine or thick wall. It may sometimes reveal membrane detachment or daughter vesicles also visible by CT scan and by MRI that may also reveal an intracystic liquid-liquid level or a parietal enhancement attesting to a modified or infected cyst [7,8]. Calcifications of the lining and the walls may be identified by ultrasound and CT scan. The imaging should be accompanied by the search for other hydatid locations, in particular in the liver, lungs, kidneys or bones.

Hypereosinophilia is of value only in the orientation of the diagnosis as the hydatid serology presents a non-negligible proportion of false negatives [9]. The appearance in imaging and hydatid serology helps eliminate other aetiologies of prostatic cysts such as cyst of the utricle and the ejaculatory ducts, parenchymal retention collections, abscess of the prostate and the post-biopsy cysts and benign cystic tumours (cystadenoma) or malignant cystic tumours (cystadenocarcinoma) [10]. The treatment of the hydatid cyst is based on the evacuation of the contents and the sterilisation of the residual cavity by suprapubic route or endoscopy, as the main advantage is that it is mini-invasive [4,6].

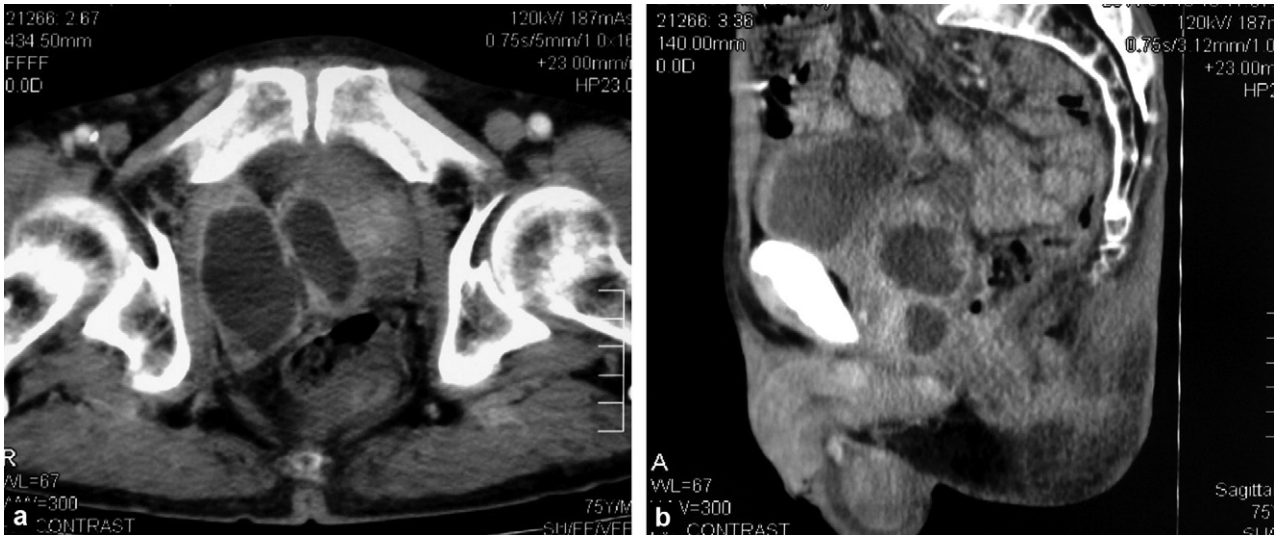

Figure 2. Computed tomography scan of the pelvis with injection: enhancement of the wall of the cyst. a: axial section centred on the prostate; b: sagittal reconstruction.

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

References

[1] Bourée P. Parasitoses urinaires. Ann Urol 2005;39:232—46.
[2] Thompson RCA. Echinococcosis. In: Gillespie SH, Pearson RD, editors. Principles and practice of clinical parasitology. Chichester: John Wiley & Sons; 2001. p. 585—612.
[3] Ozbey I, Aksoy Y, Polat O, Atmaca AF, Demirel A. Clinical management of hydatid disease of the urinary tract. J Int Med Res 2002;30:346—52.
[4] El-Kappany HA, El-Nahas AR, El-Nahas HA. Laparoscopic excision of prostatic hydatid cyst. J Endourol 2005;19(3):290—4.
[5] Ptasznik R, Hennessy OF. Pelvic hydatid disease presenting as acute urine retention. Br J Radiol 1988;61:164—5.
[6] Nouira Y, Binous MY, Nouira K, Mekni A, Kallel Y, Fitouri Z, et al. Intraprostatic hydatid cyst: an unusual presentation. ScientificWorldJournal 2006;19(6):2315—8.
[7] Hasni Bouraoui I, Jemni H, Arifa N, Chebli M, Ben Sorba N, Tlili K. Aspect en imagerie du kyste hydatique du rein : à propos de 41 cas. Prog Urol 2006;16(2):139—44.
[8] Saglam M, Tasar M, Bulakbasi N, Tayfun C, Somuncu I. TRUS, CT and MRI findings of hydatid disease of seminal vesicles. Eur Radiol 1998;8:933—5.
[9] Soufi M, Lahlou MK, Messrouri R, Benamr S, Essadel A, Mdaghri J, et al. Kyste hydatique du psoas : à propos de deux cas. J Radiol 2010;91:1292—4.
[10] Benedetto Galosi A, Montironi R, Fabiani A, Lacetera V, Gallé G, Muzzonigro G. Cystic lesions of the prostate gland: an ultrasound classification with pathological Correlation. J Urol 2009;181:647—57.